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09/648,822	08/25/2000	Jurgen Gripp	2-35	6312

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Docket Administrator Rm 3C 512  
Lucent Technologies Inc  
600 Mountain Avenue  
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EXAMINER

PAYNE, DAVID C

ART UNIT	PAPER NUMBER
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2633

DATE MAILED: 09/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/648,822

Applicant(s)

GRIPP ET AL.

Examiner

David C. Payne

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 25 August 2000.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14-20 is/are allowed.
- 6) ☒ Claim(s) 1-6, 9-13 and 21-27 is/are rejected.
- 7) ☒ Claim(s) 7 and 8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 August 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3                      6) ☐ Other:

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to because figures are hand drawn and illegible. In particular many of the drawings have hand written reference numbers that are not discernable. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim(s) 1-4, and 21-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaminow et al. US005623356A (Kaminow) in view of Glance et al. US005455699A (Glance).

Re claim(s) 1,3, 22, 24, 25 and 27 Kaminow disclosed,

An optical router comprising at least one frequency router (Figure 1) having a plurality of input ports ( $101_1 - 101_N$ ) and a plurality of output ports ( $127_1 - 127_N$ ), at least one input port simultaneously receives at least two optical signals-to be frequency routed (e.g., col./line(s): 2/55-60), and at least one output port simultaneously presenting at least two frequency routed optical signals (e.g., col./line(s): 3/60-65),

Kaminow did not disclose wherein each optical signal to be frequency routed is colored in response to destination information.

Glance disclosed a frequency router where each optical signal to be frequency routed in response to destination information (e.g., col./line(s): 2/44-47, 3/45-50). It would have been obvious to one of ordinary skill in the art at the time of invention route according to packet destination for the

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benefit building a large-capacity packet network that are optically transparent between input and output ports as disclosed by Glance (see e.g., col./line(s): 1/20-25).

Re claim(s) 21 the aforementioned invention disclosed N signals to N destinations as well as modulating data on the inputs (see Kaminow e.g., col./line(s): 3/3/50-60).

Re claim(s) 23 and 26, Glance disclosed removing a signal from an output port and processing the other signal (Figure 1 #3).

Re claim(s) 2, In the modified invention, Kaminow disclosed a plurality of combiners, one combiner for combining the at least two optical signals to be routed (Figure 2 #203, col./line: 4/25-40) and Glance disclosed a plurality of receivers, one receiver for separating each of the at least two routed optical signals to intended destinations in response to destination information (Figure 1,  $R_{X1} - R_{Xn}$ )

Re claim(s) 4, In the modified invention as taught, Kaminow disclosed wherein the optical router receives packets of data, each packet of data having destination information, each combiner coupled with at least one converter of a plurality, each converter converting at least one packet of -data to an optical signal colored in response to the destination information of the corresponding at least one packet of data (Figure 2).

4. Claim(s) 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kaminow et al. US005623356A (Kaminow) and Glance et al. US005455699A (Glance) as applied to claim 4 above, and further in view of Wang et al. US005745612 (Wang).

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Re claim 5, Kaminow further disclosed

at least one input waveguide (Figure 1 #101<sub>I</sub>);

at least one output waveguide (Figure 1 #101<sub>N</sub>);

a first (Figure 1 #117<sub>I</sub>) and a second free space region (Figure 1 #117<sub>F</sub>), the first free space region coupled with the at least one input waveguide and the second free space region coupled with the at least one output waveguide (127). Kaminow and Glance do not disclose optical grating having a plurality of unequal length waveguides, each unequal length waveguide coupled between the first free space region and the second free space region. However, Wang (Figure 1) disclosed AWG (111 and 112) coupled in such a manner. It would have been obvious to one of ordinary skill in the art at the time of invention to use Wang's AWGs for the benefit removing on-chip waveguide crossing, overlapping) and therefore reducing signal loss (e.g., col./line(s): 2/64-67, 3/1-5)

5. Claim(s) 5, 6 and 9-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaminow et al. US005623356A (Kaminow) and Glance et al. US005455699A (Glance) as applied to claim 4 above, and further in view of Brock et al. US005870216A (Brock).

Re claim 5, Kaminow further disclosed

at least one input waveguide (Figure 1 #101<sub>I</sub>);

at least one output waveguide (Figure 1 #101<sub>N</sub>);

a first (Figure 1 #117<sub>I</sub>) and a second free space region (Figure 1 #117<sub>F</sub>), the first free space region coupled with the at least one input waveguide and the second free space region coupled with the at least one output waveguide (127). Kaminow and Glance do not disclose optical grating having a plurality of unequal length waveguides, each unequal length waveguide coupled between the first free space region and the second free space region. However, Brock (Figure 7) disclosed AWG (126 and 128) coupled in such a manner. It would have been obvious to one of ordinary skill in the art at the time of invention to use Brock's AWGs for the benefit removing reducing signal loss

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associated with discrete components.

Re claim(s) 6 and 9, In the modified invention as taught,

Glance disclosed the at least two tunable filters (Figure 1 #3);

However, Kaminow and Glance do not disclose at least one splitter for splitting the at least two routed optical signals between the at least two tunable filters such that at least one of the at least two tunable filters is tuned to pass one of the at least two routed optical signals to an intended designation. However, Brock disclosed splitters (Figure 2B #70) in a wavelength router. It would have been obvious to one of ordinary skill in the art at the time of invention to use Brock's splitters for the benefit of obtaining broadcast capability (e.g., col./line: 2/35-40).

Re claim(s) 10, in the modified invention as taught tunable light sources (Glance, col./line: 2/35-40, or Brock Figure 7 #122).

Re claim(s) 11, In the modified invention as taught, Kaminow disclosed wherein the optical router receives packets of data, each packet of data having destination information, each converter converting at least one packet of -data to an optical signal colored in response to the destination information of the corresponding at least one packet of data (Figure 2).

Re claim(s) 12, In the modified invention as taught, Kaminow disclosed a packet selector or 'scheduler' (Glance, Figure 2 #16, e.g., col./line: 2/65-67, 3/1-15).

Re claim 13, Kaminow disclosed

at least one input waveguide (Figure 1 #101<sub>I</sub>);

at least one output waveguide (Figure 1 #101<sub>N</sub>);

a first (Figure 1 #117<sub>I</sub>) and a second free space region (Figure 1 #117<sub>F</sub>), the first free space region

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coupled with the at least one input waveguide and the second free space region coupled with the at least one output waveguide (127) and Wang (Figure 1) disclosed AWG (111 and 112) coupled in such a manner.

*Allowable Subject Matter*

6. Claims 14-20 are allowed.
7. Claims 7 and 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Conclusion*

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David C. Payne whose telephone number is (703) 306-0004. The examiner can normally be reached on M-F, 7a-4p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (703) 305-4729. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

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Dcp



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